

Application for FCC Certificate
On Behalf of
Hisense Electric Co., Ltd.

LCD TV

Model No.	Serial No.	Brand
LHDN26W57US	--	Hisense
LHDN26W60US	--	
LHDN26W58US	--	
LHDN26W61US	--	
LHD26V68US	--	
ELCHS262	E2009081302	Element
ELCHW261	--	

FCC ID : W9HLCDB0001

Prepared For : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology
Development Zone, Qingdao, China

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Report No. : ACI-F09072A2
Date of Test : Aug 13-14, 2009
Date of Report : Aug 17, 2009

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TEST REPORT FOR FCC CERTIFICATE

Applicant : Hisense Electric Co., Ltd.
 Manufacturer : Hisense Electric Co., Ltd.
 EUT Description : LCD TV

Model No.	Serial No.	Brand	Power Supply
LHDN26W57US	--	Hisense	120V/60Hz
LHDN26W60US	--		
LHDN26W58US	--		
LHDN26W61US	--		
LHD26V68US	--		
ELCHS262	E2009081302	Element	
ELCHW261	--		

Test Procedure Used:

*FCC RULES AND REGULATIONS PART 15 SUBPART B CLASS B OCTOBER 2008
AND ANSI C63.4-2003*

The device described above is tested by Audix Technology (Shanghai) Co., Ltd. to determine the maximum emission levels emanating from the device. The maximum emission levels are compared to the FCC Part 15 Subpart B (Class B) limits both radiated and conducted emissions.

The test results are contained in this test report and Audix Technology (Shanghai) Co., Ltd. is assumed full responsibility for the accuracy and completeness of these measurements. This report shows that the EUT (M/N: Refer to Sec.2.1; S/N: Refer to Sec.2.1) which was tested in 3m anechoic chamber Aug 13-14, 2009 is technically compliance with the FCC official limits also.

This report applies to above tested sample only. This report shall not be reproduced in part without written approval of Audix Technology (Shanghai) Co., Ltd.

This report contains data that are not covered by the NVLAP accreditation.


This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, or any agency of the federal government.

The test results for EUT's TV function are contained in No.F09071A2, a Verification report.

Date of Test : Aug 13-14, 2009 Date of Report : Aug 17, 2009

Producer : 
ALAN / Assistant

Review : 
DIO YANG / Deputy Assistant Manager

 For and on behalf of
Audix Technology (Shanghai) Co., Ltd.

.....

 Authorized Signature EMC BYRON KWO / Manager

1 SUMMARY OF STANDARDS AND RESULTS

1.1 Description of Standards and Results

The EUT have been tested according to the applicable standards as referenced below:

Description of Test Item	Standard	Limits	Results
EMISSION			
Conducted Disturbance at the Mains Terminal	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 AND ANSI C63.4-2003	15.107(a) Class B	Pass
Radiated Disturbance	FCC RULES AND REGULATIONS PART 15 SUBPART B OCTOBER 2008 AND ANSI C63.4-2003	15.109(a) Class B	Pass

2 GENERAL INFORMATION

2.1 Description of Equipment Under Test

Description : LCD TV

Type of EUT : Production Pre-product Pro-type

Model No.	Serial No.	Brand
LHDN26W57US	--	Hisense
LHDN26W60US	--	
LHDN26W58US	--	
LHDN26W61US	--	
LHD26V68US	--	
ELCHS262	E2009081302	Element
ELCHW261	--	

Note 1 : The difference list for all models are as follows:

Report No.	Model No.	Rev. Summary	Edition No.	Data of Rev.
ACI-F09072	LHDN26W57US, LHDN26W60US, LHDN26W58US, LHDN26W61US, LHD26V68US, ELCHS262, ELCHW261	Original Report.	0	Aug 03, 2009
ACI-F09072A1		(1) To Change LCD panel. (2) To add one core	Rev. A1	Aug 07, 2009
ACI-F09072A2		(1) To Change LCD panel.	Rev. A2	Aug 17, 2009

Note 2 : The ELCHS262 was tested and recorded in this report.

Applicant : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China

Manufacturer : Hisense Electric Co., Ltd.
No.218 Qianwangang Road, Economy & Technology Development Zone, Qingdao, China

LCD Panel : Manufacturer : Hisense Electric Co., Ltd.
M/N : V260B1-L02\HS\BLN

Tuner : Manufacturer : XuGuang Tech Co., Ltd.
M/N : DVT-8ADC1/W41F2\ROH

Max Resolution : 1360*768@60Hz

D-Sub Cable	:	Shielded, Detachable, 1.85m, with two cores on cable
HDMI Cable	:	Shielded, Detachable, 1.85m, without core on cable
Power Cord	:	Unshielded, Detachable, 1.80m

Remark:

The EUT is a LCD TV which input/output ports as follows:

Rear View:

- | | | |
|-----|------------------------------------|--------------------------|
| (1) | One component of YPbPr1 Port | Connected with DVD #1 |
| (2) | One component of YPbPr1 Audio Port | Connected with DVD #1 |
| (3) | One component of YpbPr2 Port | Connected with DVD #2 |
| (4) | One component of YPbPr2 Audio Port | Connected with DVD #2 |
| (5) | One HDMI1 Port | Connected with PC/DVD #1 |
| (6) | One HDMI2 Port | Connected with PC/DVD #2 |
| (7) | One VGA Port | Connected with PC |
| (8) | One VGA Audio Port | Connected with PC |
| (9) | One Audio Out Port | Connected with Speaker |

Side Port:

- | | | |
|------|-----------------------------|-------------------------------------|
| (10) | One S-Video Port | Connected with TV SG |
| (11) | One ANT Port | Connected with TV SG/ATSC SG |
| (12) | One component of AV In Port | Connected with DVD #1 |
| (13) | One COAXIAL Port | Connected with DVD #1 |
| (14) | One Earphone Port | Connected with Earphone |
| (15) | One USB (Service) Port | Connected with U-Disk as Terminator |

2.2 Peripherals

2.2.1 PC

Manufacturer : HP
Model Number : dx7200MT
Serial Number : CNG622017W
Power Cord : Unshielded, Detachable, 1.8m
Certificate : FCC DoC; CE/EMC; VCCI; C-Tick; UL
BSMI (R33001) 3C (A000111)
MIC (E-A011-04-2659(B))

2.2.2 Printer

Manufacturer : HP
Model Number : C3990A
Serial Number : JPZX020487
Data Cable : Shielded, detachable, 1.5m
Certificate : GS, CE/EMC, C-Tick, FCC DoC

2.2.3 Keyboard

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 7668200662248
Data Cable : Shielded, undetachable ,1.8m
Certificate : CE/EMC, FCC DoC, VCCI, MIC, C-Tick,
BSMI

2.2.4 Mouse

Manufacturer : Microsoft
Model Number : RT2300
Serial Number : 6965712071551
Data Cable : Shielded, undetachable, 1.8m.
Certificate : CE/EMC, FCC DoC, VCCI, MIC, C-Tick,
BSMI

2.2.5 Modem

Manufacturer : TP-LINK
Model Number : TM-EC5658V
Serial Number : 07123301053
Data Cable : Shielded, Detachable, 1.8m
Certificate : FCC DoC, CE/EMC, CCC

2.2.6 Earphone

Manufacturer : SONY
Model Number : MDR-E808
Serial Number : 1808030805305506

2.2.7 TV Signal Generator

Manufacturer : FLUKE
Model Number : 54200m01
Serial Number : 814008
Data Cable : Shielded, detachable, 2.0m
Power Cord : Unshielded, detachable, 2.0m
Certificate : CE/EMC, FCC DoC, CCC

2.2.8 ATSC Signal Generator

Manufacturer : SENCORE
Model Number : ATSC997
Serial Number : 6790071

2.2.9 DVD#1

Manufacturer : PHILIPS
Model Number : DVP3986K/93
Serial Number : KX1A0902120108
Certificate : FCC DoC, CE/EMC, CCC

2.2.10 DVD#2

Manufacturer : PHILIPS
Model Number : DVP3986K/93
Serial Number : KX1A0902120082
Certificate : FCC DoC, CE/EMC, CCC

2.2.11 Speaker

Manufacturer : DIBA
Model Number : T520
Serial Number : 10628

2.2.12 U-Disk

Manufacturer : LG
Model Number : 1GB
Serial Number : N/A

2.3 Description of Test Facility

Site Description (Semi-Anechoic Chamber) : Sept. 17, 1998 file on
Apr 29, 2009 Renewed
Federal Communications Commission
FCC Engineering Laboratory
7435 Oakland Mills Road
Columbia, MD 21046, USA

Name of Firm : Audix Technology (Shanghai) Co., Ltd.

Site Location : 3F 34Bldg 680 Guiping Rd,
Caohejing Hi-Tech Park,
Shanghai 200233, China

NVLAP Lab Code : 200371-0

2.4 Measurement Uncertainty

Conducted Emission Expanded Uncertainty: U = 1.26 dB
Radiated Emission Expanded Uncertainty : U = 3.02 dB

3 CONDUCTED EMISSION TEST

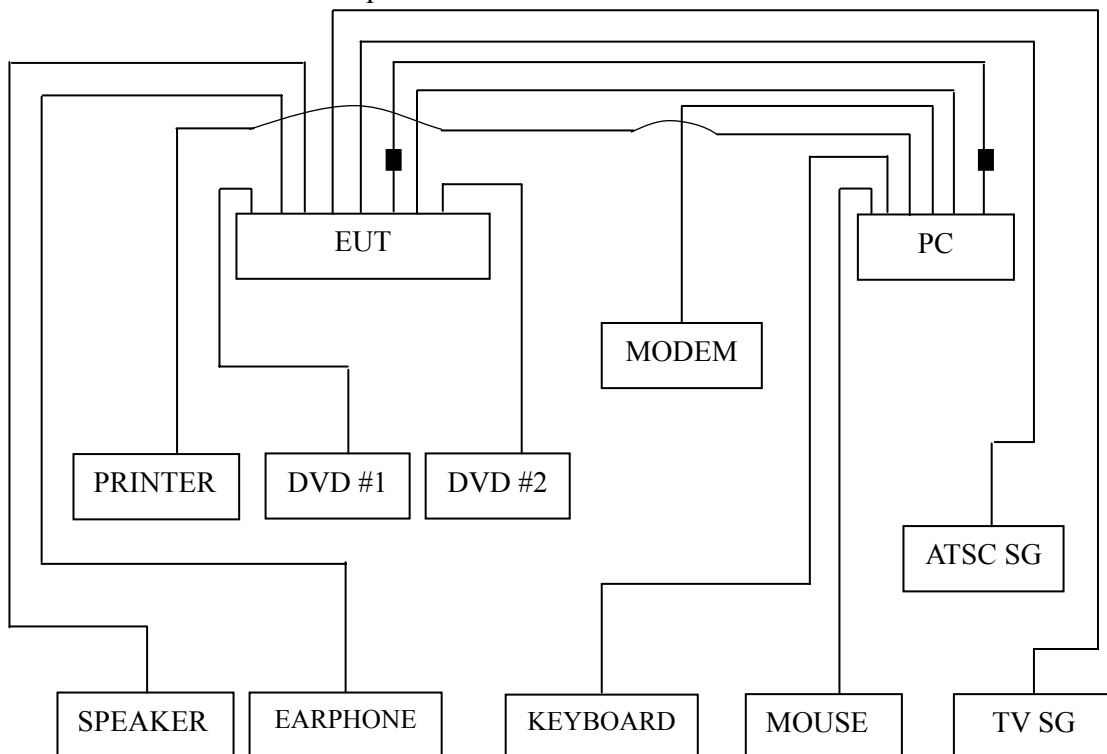
3.1.1 Test Equipment

The following test equipments are used during the conducted emission test in a shielded room:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESCI	100841	Nov 21, 2008	Nov 21, 2009
2.	Artificial Mains Network (AMN)	R&S	ESH2-Z5	843890/011	Apr 02, 2009	Apr 02, 2010
3.	Line Impedance Stabilization Network (LISN)	Kyoritsu	KNW-407	8-1280-4	Apr 02, 2009	Apr 02, 2010
4.	50 Ω Coaxial Switch	Anritsu	MP59B	6200426389	Mar 19, 2009	Sep 19, 2009
5.	50 Ω Terminator	Anritsu	BNC	001	Apr 02, 2009	Apr 02, 2010
6.	Software	Audix	E3	SET00200 9804M592	--	--

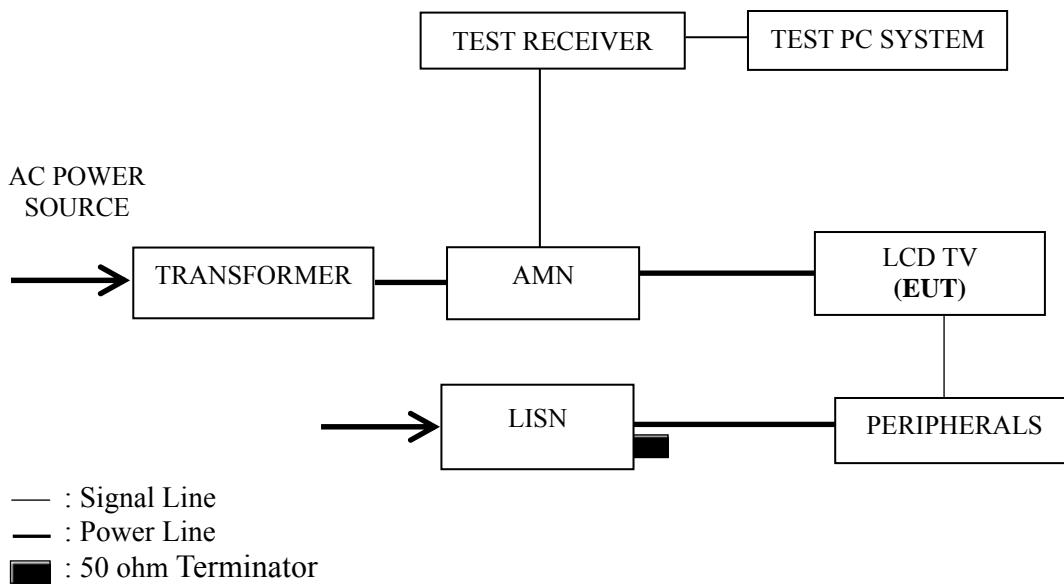
3.2 Block Diagram of Test Setup

3.2.1 EUT & Peripherals



■ : Ferrite core

3.2.2 Conducted Disturbance Test Setup



3.3 Conducted Emission Limit [FCC Part 15 Subpart B 15.107(a)]

Frequency Range (MHz)	Limits dB (μ V)	
	Quasi-peak	Average
0.15 ~ 0.5	66~56	56~46
0.5 ~ 5	56	46
5 ~ 30	60	50

NOTE 1 – The lower limit shall apply at the transition frequencies.
 NOTE 2 – The limit decreases linearly with the logarithm of the frequency in the range 0.15 MHz~0.50 MHz

3.4 Test Configuration

The EUT (listed in Sec.2.1) and the peripherals (listed in Sec 2.2) were installed as shown on Sec.3.2 to meet FCC requirement and operating in a manner that tends to maximize its emission level in a normal application.

3.5 Operating Condition of EUT

3.5.1 Setup the EUT and peripherals as shown in Sec. 3.2.

3.5.2 Turn on the power of all equipments and the EUT.

3.5.3 Set the contrast & brightness of EUT to maximum.

3.5.4 PC system ran the self-test program “EMC Test” by windows XP and sent “H” characters to EUT through graphic card, the EUT’s screen displayed and filled with “H” pattern by its resolution (Via D-Sub & HDMI Input).

3.5.5 Repeat above procedure from 3.5.3 to 3.5.4 for difference test mode.

3.5.6 The other peripherals devices were driven and operated during the test.

3.5.7 The test modes are as follows:

Test Mode
D-Sub 640*480@60Hz
D-Sub 1024*768@60Hz
D-Sub 1360*768@60Hz
HDMI 640*480@60Hz
HDMI 1024*768@60Hz
HDMI 1360*768@60Hz

3.6 Test Procedures

The EUT and peripherals were connected to the power mains through an Artificial Mains Network (AMN). This provided a 50 ohm coupling impedance for the measuring equipment.

Both sides of AC line (Line & Neutral) were checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables were changed or manipulated according to ANSI C63.4:2003 during conducted emission test.

The bandwidth of R&S Test Receiver ESCI was set at 9 kHz.

The frequency range from 150 kHz to 30 MHz was checked.

The test modes were done on conducted disturbance test and all the test results are listed in Sec. 3.7.

3.7 Test Results

< **PASS** >

The frequency and amplitude of the highest conducted emission relative to the limit is reported. All emissions not reported below are too low against the prescribed limits.

Test Mode	Data Page
D-Sub 640*480@60Hz	P13
D-Sub 1024*768@60Hz	P14
D-Sub 1360*768@60Hz	P15
HDMI 640*480@60Hz	P16
HDMI 1024*768@60Hz	P17
HDMI 1360*768@60Hz	P18

NOTE 1 – Factor = Cable Loss + AMN Factor.

NOTE 2 – Emission Level = Meter Reading + Factor.

NOTE 3 – “QP” means “Quasi-Peak” values, “AV” means “Average” values.

NOTE 4 – The worst case is for D-Sub 1024*768@60Hz test mode. The worst emission is detected at 1.819 MHz (Average value) with corrected signal level of 36.92 dB (μV) (limit is 46.00 dB (μV)), when the Neutral of the EUT is connected to AMN.

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 48%RH

Serial No. : E2009081302 Date of Test : Aug 13, 2009

Test Mode : D-Sub 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.160	33.96	0.23	34.19	65.47	31.28	QP
	0.389	33.89	0.28	34.17	58.08	23.91	
	1.487	34.25	0.34	34.59	56.00	21.41	
	4.407	33.87	0.44	34.31	56.00	21.69	
	5.774	34.17	0.45	34.62	60.00	25.38	
	16.055	33.06	0.75	33.81	60.00	26.19	
	0.160	22.09	0.23	22.32	55.47	33.15	AV
	0.389	30.35	0.28	30.63	48.08	17.45	
	1.487	27.69	0.34	28.03	46.00	17.97	
	4.407	23.16	0.44	23.60	46.00	22.40	
	5.774	23.65	0.45	24.10	50.00	25.90	
	16.055	23.17	0.75	23.92	50.00	26.08	
Neutral	0.151	33.09	0.20	33.29	65.96	32.67	QP
	0.389	35.62	0.25	35.87	58.08	22.21	
	1.487	35.36	0.34	35.70	56.00	20.30	
	2.261	35.03	0.37	35.40	56.00	20.60	
	5.112	36.66	0.45	37.11	60.00	22.89	
	16.398	35.92	0.73	36.65	60.00	23.35	
	0.151	23.36	0.20	23.56	55.96	32.40	AV
	0.389	31.86	0.25	32.11	48.08	15.97	
	1.487	25.66	0.34	26.00	46.00	20.00	
	2.261	26.35	0.37	26.72	46.00	19.28	
	5.112	25.90	0.45	26.35	50.00	23.65	
	16.398	26.94	0.73	27.67	50.00	22.33	

TEST ENGINEER: HUGH HUANG

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 48%RH

Serial No. : E2009081302 Date of Test : Aug 13, 2009

Test Mode : D-Sub 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.160	33.05	0.23	33.28	65.47	32.19	QP
	0.389	33.82	0.28	34.10	58.08	23.98	
	1.487	34.29	0.34	34.63	56.00	21.37	
	4.407	35.27	0.44	35.71	56.00	20.29	
	5.774	33.74	0.45	34.19	60.00	25.81	
	16.486	32.98	0.76	33.74	60.00	26.26	
	0.160	26.86	0.23	27.09	55.47	28.38	AV
	0.389	30.43	0.28	30.71	48.08	17.37	
	1.487	28.76	0.34	29.10	46.00	16.90	
	4.407	26.21	0.44	26.65	46.00	19.35	
	5.774	24.69	0.45	25.14	50.00	24.86	
	16.486	24.20	0.76	24.96	50.00	25.04	
Neutral	0.162	34.04	0.20	34.24	65.34	31.10	QP
	0.389	35.12	0.25	35.37	58.08	22.71	
	0.521	33.68	0.26	33.94	56.00	22.06	
	1.819	37.72	0.36	38.08	56.00	17.92	
	5.713	31.64	0.46	32.10	60.00	27.90	
	16.226	34.21	0.72	34.93	60.00	25.07	
	0.162	29.15	0.20	29.35	55.34	25.99	AV
	0.389	32.02	0.25	32.27	48.08	15.81	
	0.521	33.14	0.26	33.40	46.00	12.60	
	1.819	36.56	0.36	36.92	46.00	9.08	
	5.713	25.42	0.46	25.88	50.00	24.12	
	16.226	26.91	0.72	27.63	50.00	22.37	

TEST ENGINEER: HUGH HUANG

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 48%RH

Serial No. : E2009081302 Date of Test : Aug 13, 2009

Test Mode : D-Sub 1360*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.161	34.00	0.23	34.23	65.43	31.20	QP
	0.389	35.95	0.28	36.23	58.08	21.85	
	1.487	36.88	0.34	37.22	56.00	18.78	
	1.819	35.03	0.36	35.39	56.00	20.61	
	5.713	34.86	0.45	35.31	60.00	24.69	
	16.486	32.51	0.76	33.27	60.00	26.73	
	0.161	26.85	0.23	27.08	55.43	28.35	AV
	0.389	30.83	0.28	31.11	48.08	16.97	
	1.487	29.93	0.34	30.27	46.00	15.73	
	1.819	30.29	0.36	30.65	46.00	15.35	
	5.713	25.86	0.45	26.31	50.00	23.69	
	16.486	26.10	0.76	26.86	50.00	23.14	
Neutral	0.162	35.07	0.20	35.27	65.34	30.07	QP
	0.389	37.13	0.25	37.38	58.08	20.70	
	1.043	35.98	0.30	36.28	56.00	19.72	
	1.819	38.59	0.36	38.95	56.00	17.05	
	5.058	34.94	0.45	35.39	60.00	24.61	
	16.661	36.52	0.73	37.25	60.00	22.75	
	0.162	29.07	0.20	29.27	55.34	26.07	AV
	0.389	32.20	0.25	32.45	48.08	15.63	
	1.043	31.69	0.30	31.99	46.00	14.01	
	1.819	36.09	0.36	36.45	46.00	9.55	
	5.058	28.12	0.45	28.57	50.00	21.43	
	16.661	29.42	0.73	30.15	50.00	19.85	

TEST ENGINEER: HUGH HUANG

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 48%RH

Serial No. : E2009081302 Date of Test : Aug 13, 2009

Test Mode : HDMI 640*480@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.164	31.59	0.23	31.82	65.25	33.43	QP
	0.389	36.40	0.28	36.68	58.08	21.40	
	0.521	38.17	0.29	38.46	56.00	17.54	
	1.819	36.91	0.36	37.27	56.00	18.73	
	6.627	38.12	0.47	38.59	60.00	21.41	
	13.989	31.27	0.67	31.94	60.00	28.06	
	AV	0.164	26.57	0.23	26.80	55.25	28.45
		0.389	31.92	0.28	32.20	48.08	15.88
		0.521	35.44	0.29	35.73	46.00	10.27
		1.819	28.49	0.36	28.85	46.00	17.15
		6.627	30.55	0.47	31.02	50.00	18.98
		13.989	24.19	0.67	24.86	50.00	25.14
Neutral	0.166	37.19	0.20	37.39	65.16	27.77	QP
	0.389	36.64	0.25	36.89	58.08	21.19	
	0.521	38.79	0.26	39.05	56.00	16.95	
	1.819	39.07	0.36	39.43	56.00	16.57	
	6.627	39.76	0.48	40.24	60.00	19.76	
	17.383	28.05	0.78	28.83	60.00	31.17	
	AV	0.166	33.03	0.20	33.23	55.16	21.93
		0.389	33.28	0.25	33.53	48.08	14.55
		0.521	35.92	0.26	36.18	46.00	9.82
		1.819	34.31	0.36	34.67	46.00	11.33
		6.627	30.61	0.48	31.09	50.00	18.91
		17.383	21.70	0.78	22.48	50.00	27.52

TEST ENGINEER: HUGH HUANG

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 48%RH

Serial No. : E2009081302 Date of Test : Aug 13, 2009

Test Mode : HDMI 1024*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.164	34.37	0.23	34.60	65.25	30.65	QP
	0.389	37.42	0.28	37.70	58.08	20.38	
	1.106	38.45	0.30	38.75	56.00	17.25	
	1.819	36.88	0.36	37.24	56.00	18.76	
	6.698	38.49	0.47	38.96	60.00	21.04	
	13.551	31.23	0.66	31.89	60.00	28.11	
	0.164	24.32	0.23	24.55	55.25	30.70	AV
	0.389	31.82	0.28	32.10	48.08	15.98	
	1.106	34.35	0.30	34.65	46.00	11.35	
	1.819	29.25	0.36	29.61	46.00	16.39	
	6.698	31.20	0.47	31.67	50.00	18.33	
	13.551	24.60	0.66	25.26	50.00	24.74	
Neutral	0.164	37.42	0.20	37.62	65.25	27.63	QP
	0.389	37.69	0.25	37.94	58.08	20.14	
	0.521	38.61	0.26	38.87	56.00	17.13	
	1.819	39.13	0.36	39.49	56.00	16.51	
	6.557	36.70	0.48	37.18	60.00	22.82	
	16.661	30.15	0.73	30.88	60.00	29.12	
	0.164	32.12	0.20	32.32	55.25	22.93	AV
	0.389	33.04	0.25	33.29	48.08	14.79	
	0.521	35.76	0.26	36.02	46.00	9.98	
	1.819	33.36	0.36	33.72	46.00	12.28	
	6.557	27.92	0.48	28.40	50.00	21.60	
	16.661	22.09	0.73	22.82	50.00	27.18	

TEST ENGINEER: HUGH HUANG

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 48%RH

Serial No. : E2009081302 Date of Test : Aug 13, 2009

Test Mode : HDMI 1360*768@60Hz

Test Line	Frequency (MHz)	Meter Reading dB(μ V)	Factor (dB)	Emission Level dB(μ V)	Limits dB(μ V)	Margin (dB)	Remark
Line	0.164	32.61	0.23	32.84	65.25	32.41	QP
	0.389	36.51	0.28	36.79	58.08	21.29	
	1.106	38.38	0.30	38.68	56.00	17.32	
	1.819	35.64	0.36	36.00	56.00	20.00	
	6.627	36.45	0.47	36.92	60.00	23.08	
	13.695	31.03	0.66	31.69	60.00	28.31	
	0.164	26.80	0.23	27.03	55.25	28.22	AV
	0.389	31.82	0.28	32.10	48.08	15.98	
	1.106	34.01	0.30	34.31	46.00	11.69	
	1.819	29.52	0.36	29.88	46.00	16.12	
	6.627	29.34	0.47	29.81	50.00	20.19	
	13.695	22.95	0.66	23.61	50.00	26.39	
Neutral	0.164	36.02	0.20	36.22	65.25	29.03	QP
	0.389	37.83	0.25	38.08	58.08	20.00	
	0.521	37.49	0.26	37.75	56.00	18.25	
	1.819	37.54	0.36	37.90	56.00	18.10	
	6.627	36.57	0.48	37.05	60.00	22.95	
	17.383	29.24	0.78	30.02	60.00	29.98	
	0.164	32.01	0.20	32.21	55.25	23.04	AV
	0.389	33.09	0.25	33.34	48.08	14.74	
	0.521	35.73	0.26	35.99	46.00	10.01	
	1.819	33.20	0.36	33.56	46.00	12.44	
	6.627	29.19	0.48	29.67	50.00	20.33	
	17.383	22.61	0.78	23.39	50.00	26.61	

TEST ENGINEER: HUGH HUANG

4 RADIATED EMISSION TEST

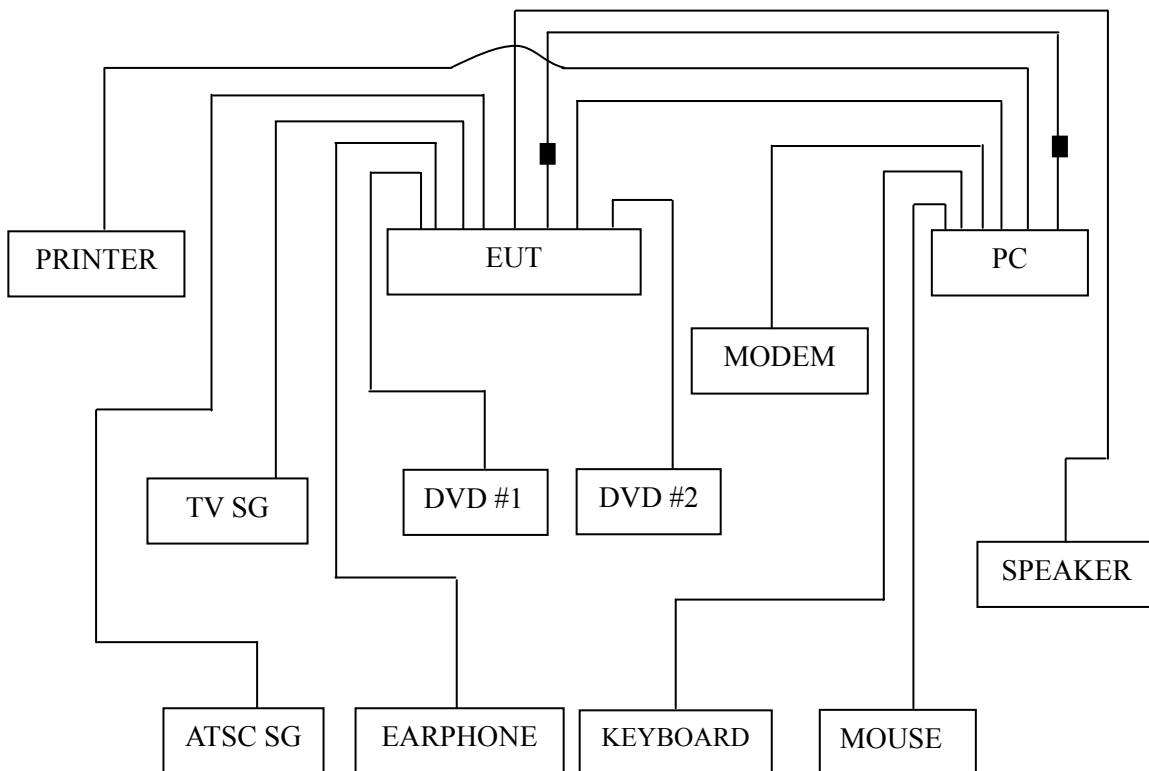
4.1 Test Equipment

The following test equipments are used during the radiated emission test in a semi-anechoic chamber:

Item	Type	Manufacturer	Model No.	Serial No.	Last Cal.	Next Cal.
1.	Test Receiver	R&S	ESVS10	844594/001	Mar 07, 2009	Mar 07, 2010
2.	Preamplifier	Agilent	8447D	2944A10548	Mar 19, 2009	Sep 19, 2009
3.	Bi-log Antenna	TESEQ	CBL6112D	23193	May 14, 2008	May 14, 2010
4.	Spectrum	Agilent	E7405A	MY45106600	May 19, 2009	May 19, 2010
5.	Software	Audix	E3	SET00200 9912M295-2	--	--

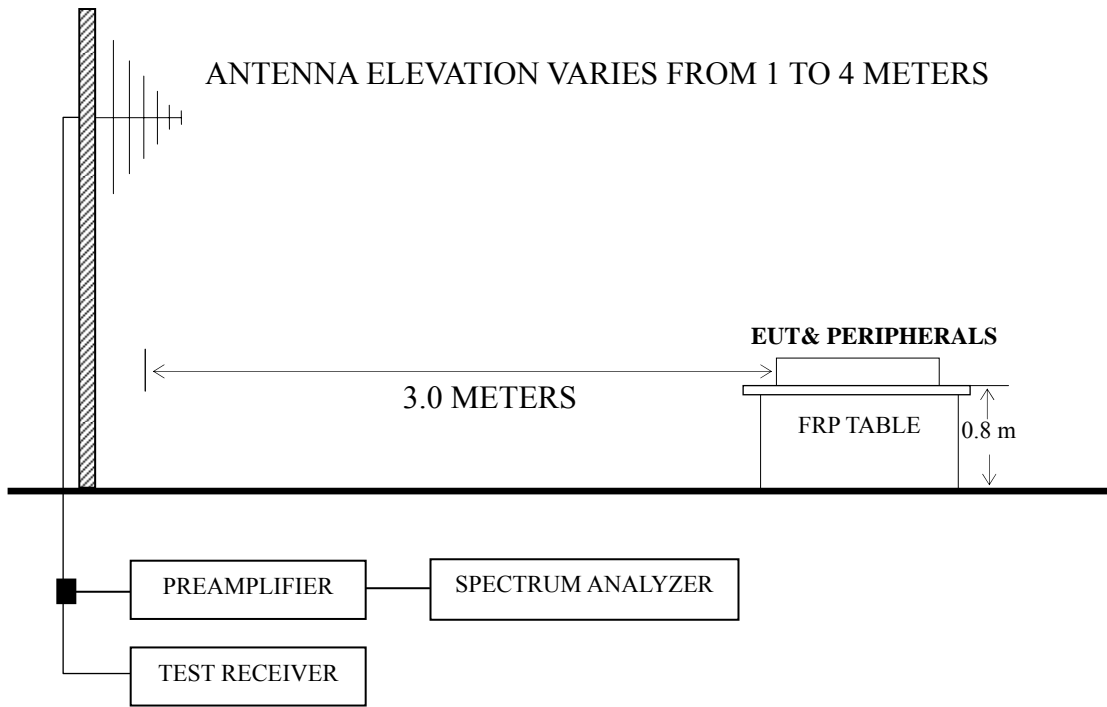
4.2 Block Diagram of Test Setup

4.2.1 EUT and Peripherals



■ : Ferrite core

4.2.2 Radiated emission test setup



■ : 50 ohm Coaxial Switch

4.3 Radiated Emission Limit [FCC Part 15 Subpart B 15.109(a)]

Frequency (MHz)	Distance (m)	Field strength limits	
		($\mu\text{V/m}$)	dB ($\mu\text{V/m}$)
30 ~ 88	3	100	40.0
88 ~ 216	3	150	43.5
216 ~ 960	3	200	46.0
Above 960	3	500	54.0

NOTE 1 - Emission Level dB ($\mu\text{V/m}$) = 20 log Emission Level ($\mu\text{V/m}$)

NOTE 2 - The tighter limit applies at the band edges.

NOTE 3 - Distance refers to the distance in meters between the measuring instrument antenna and the closed point of any part of the device or system.

NOTE 4 - The limits shown are based on Quasi-peak value detector.

4.4 Test Configuration

The configuration of the EUT and peripherals are same as those used in conducted emission test.

Please refer to Sec.3.4.

4.5 Operating Condition of EUT

Same as conducted emission test which is listed in Sec.3.5, except for the test setup replaced by Sec.4.2.

4.6 Test Procedures

The EUT and peripherals were placed on a FRP turntable that is 0.8 meter above ground. The FRP turntable rotated 360 degrees to determine the position of the maximum emission level. The EUT was set 3 meters away from the receiving antenna, which was mounted on an antenna tower. Broadband antenna (Calibrated Bilog Antenna) was used as receiving antenna. The antenna moved up and down between 1 meter and 4 meters to find out the maximum emission level. Both horizontal and vertical polarizations of the antenna were set on measurement. In order to find the maximum emission, all of the interference cables were manipulated according to ANSI C63.4:2003 requirements during radiated emission test.

The bandwidth of Test Receiver R&S ESVS10 was set at 120 kHz.

The frequency range from 30 MHz to 1000MHz was checked for all test modes.

The test modes were done on radiated disturbance test and all the test results are listed in Sec.4.7.

4.7 Test Results

<PASS>

The frequency and amplitude of the highest radiated emission relative the limit is reported. All the emissions not reported below are too low against the FCC limit.

Test Mode	Data Page
D-Sub 640*480@60Hz	P22
D-Sub 1024*768@60Hz	P23
D-Sub 1360*768@60Hz	P24
HDMI 640*480@60Hz	P25
HDMI 1024*768@60Hz	P26
HDMI 1360*768@60Hz	P27

NOTE 1 – Emission Level = Antenna Factor + Cable Loss + Meter Reading.

NOTE 2 – The emission levels that are 20dB below the official limit are not reported.

NOTE 3 – 0° was the table front facing the antenna. Degree is calculated from 0° clockwise facing the antenna.

NOTE 4 – The worst case is for HDMI 1024*768@60Hz test mode. The worst emission at horizontal polarization was detected at 87.230 MHz with corrected signal level of 37.15 dB ($\mu\text{V}/\text{m}$) (limit is 40.00dB ($\mu\text{V}/\text{m}$)), when the antenna was 1.20 m height and the turntable was at 290°. The worst emission at vertical polarization was detected at 87.230 MHz with corrected signal level of 37.12 dB ($\mu\text{V}/\text{m}$) (limit is 40.00 dB ($\mu\text{V}/\text{m}$)), when the antenna was 1.00 m height and the turntable was at 215°.

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 60%RH

Serial No. : E2009081302 Date of Test : Aug 14, 2009

Test Mode : D-Sub 640*480@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	30.970	4.05	19.03	0.63	23.71	40.00	16.29
	87.230	25.39	8.96	1.00	35.35	40.00	4.65
	145.430	24.20	11.66	1.21	37.07	43.50	6.43
	327.790	11.31	14.66	1.97	27.94	46.00	18.06
	608.120	17.51	19.25	2.76	39.52	46.00	6.48
	809.880	18.29	20.80	3.21	42.30	46.00	3.70
Vertical	30.970	14.66	19.03	0.63	34.32	40.00	5.68
	87.230	27.13	8.96	1.00	37.09	40.00	2.91
	172.590	23.61	10.11	1.38	35.10	43.50	8.40
	325.850	15.54	14.62	1.97	32.13	46.00	13.87
	809.880	16.50	20.80	3.21	40.51	46.00	5.49
	996.120	22.44	22.37	3.62	48.43	54.00	5.57

TEST ENGINEER: JACKY CHEN

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 60%RH

Serial No. : E2009081302 Date of Test : Aug 14, 2009

Test Mode : D-Sub1024*768@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	30.970	4.34	19.03	0.63	24.00	40.00	16.00
	87.230	23.62	8.96	1.00	33.58	40.00	6.42
	172.590	23.35	10.11	1.38	34.84	43.50	8.66
	405.390	10.99	16.57	2.22	29.78	46.00	16.22
	608.120	13.90	19.25	2.76	35.91	46.00	10.09
	996.120	13.03	22.37	3.62	39.02	54.00	14.98
Vertical	31.940	15.80	18.49	0.64	34.93	40.00	5.07
	87.230	27.18	8.96	1.00	37.14	40.00	2.86
	172.590	22.96	10.11	1.38	34.45	43.50	9.05
	328.760	16.41	14.70	1.97	33.08	46.00	12.92
	702.210	7.59	19.73	2.94	30.26	46.00	15.74
	809.880	18.20	20.80	3.21	42.21	46.00	3.79

TEST ENGINEER: JACKY CHEN

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 60%RH

Serial No. : E2009081302 Date of Test : Aug 14, 2009

Test Mode : D-Sub1360*768@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	32.910	4.84	17.95	0.64	23.43	40.00	16.57
	95.960	21.53	10.70	1.05	33.28	43.50	10.22
	142.520	26.61	11.91	1.20	39.72	43.50	3.78
	405.390	8.99	16.57	2.22	27.78	46.00	18.22
	608.120	14.95	19.25	2.76	36.96	46.00	9.04
	809.880	15.05	20.80	3.21	39.06	46.00	6.94
Vertical	32.910	15.45	17.95	0.64	34.04	40.00	5.96
	94.990	20.18	10.45	1.05	31.68	43.50	11.82
	142.520	24.59	11.91	1.20	37.70	43.50	5.80
	227.880	20.30	12.02	1.63	33.95	46.00	12.05
	323.910	16.14	14.58	1.96	32.68	46.00	13.32
	996.120	15.42	22.37	3.62	41.41	54.00	12.59

TEST ENGINEER: JACKY CHEN

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 60%RH

Serial No. : E2009081302 Date of Test : Aug 14, 2009

Test Mode : HDMI 640*480@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	30.970	7.05	19.03	0.63	26.71	40.00	13.29
	87.230	26.39	8.96	1.00	36.35	40.00	3.65
	145.430	24.14	11.66	1.21	37.01	43.50	6.49
	327.790	11.31	14.66	1.97	27.94	46.00	18.06
	608.120	14.51	19.25	2.76	36.52	46.00	9.48
	809.880	17.29	20.80	3.21	41.30	46.00	4.70
Vertical	30.970	16.66	19.03	0.63	36.32	40.00	3.68
	87.230	27.13	8.96	1.00	37.09	40.00	2.91
	172.590	21.61	10.11	1.38	33.10	43.50	10.40
	325.850	16.89	14.62	1.97	33.48	46.00	12.52
	809.880	17.47	20.80	3.21	41.48	46.00	4.52
	996.120	19.17	22.37	3.62	45.16	54.00	8.84

TEST ENGINEER: JACKY CHEN

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 60%RH

Serial No. : E2009081302 Date of Test : Aug 14, 2009

Test Mode : HDMI 1024*768@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μ V)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μ V/m)	Limits dB (μ V/m)	Margin (dB)
Horizontal	30.970	7.34	19.03	0.63	27.00	40.00	13.00
	87.230	27.19	8.96	1.00	37.15	40.00	2.85
	150.280	20.76	11.25	1.23	33.24	43.50	10.26
	405.390	10.99	16.57	2.22	29.78	46.00	16.22
	608.120	10.90	19.25	2.76	32.91	46.00	13.09
	996.120	14.03	22.37	3.62	40.02	54.00	13.98
Vertical	31.940	14.80	18.49	0.64	33.93	40.00	6.07
	87.230	27.16	8.96	1.00	37.12	40.00	2.88
	107.600	19.47	12.10	1.10	32.67	43.50	10.83
	172.590	16.96	10.11	1.38	28.45	43.50	15.05
	328.760	16.41	14.70	1.97	33.08	46.00	12.92
	809.880	18.20	20.80	3.21	42.21	46.00	3.79

TEST ENGINEER: JACKY CHEN

EUT : LCD TV Temperature : 22°C

Model No. : ELCHS262 Humidity : 60%RH

Serial No. : E2009081302 Date of Test : Aug 14, 2009

Test Mode : HDMI 1360*768@60Hz

Polarization	Frequency (MHz)	Meter Reading dB (μV)	Antenna Factor (dB/m)	Cable Loss (dB)	Emission Level dB (μV/m)	Limits dB (μV/m)	Margin (dB)
Horizontal	32.910	7.84	17.95	0.64	26.43	40.00	13.57
	95.960	23.53	10.70	1.05	35.28	43.50	8.22
	142.520	27.48	11.91	1.20	40.59	43.50	2.91
	405.390	8.99	16.57	2.22	27.78	46.00	18.22
	608.120	11.95	19.25	2.76	33.96	46.00	12.04
	809.880	15.05	20.80	3.21	39.06	46.00	6.94
Vertical	32.910	18.40	17.95	0.64	36.99	40.00	3.01
	75.590	25.92	7.24	0.91	34.07	40.00	5.93
	114.390	25.14	12.64	1.13	38.91	43.50	4.59
	227.880	20.30	12.02	1.63	33.95	46.00	12.05
	809.880	16.37	20.80	3.21	40.38	46.00	5.62
	996.120	15.42	22.37	3.62	41.41	54.00	12.59

TEST ENGINEER: JACKY CHEN

5 DEVIATION TO TEST SPECIFICATIONS

None.

6 DEBUG DESCRIPTION

The following components are used during the countermeasure procedures:

Name	M/N	Specifications (mm)	Manufacturer	Location
Ferrite Core	ZCAT2132-1130 \ROH	21*32*11	ROH	See Internal Photo Figure 20
Ferrite Core	ZCAT3035-1330 \ROH	30*35*13	ROH	See Internal Photo Figure 21

Note: We had required the applicant and manufacturer that all electrical and mechanical devices employed for spurious radiation suppression, including any modifications made during certification testing, must be incorporated in each unit marked

TEST ENGINEER:



(JACKY CHEN)